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TITLE: METHOD AND APPARATUS FOR
TREATMENT OF EXHAUST GAS
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ABSTRACT:

PROBLEM TO BE SOLVED: To realize removal of mercury at a low cost by a method wherein combustion exhaust gas is reduced and denitrated in the presence of a solid catalyst by adding mercury chlorinating agent to the combustion gas containg NOx, SOx, and

mercury, and then wetly desulfurized with alkali absorption liquid.

SOLUTION: An ammonia injection device 2 and an HCl injection device 4 are installed to a passage from a boiler 1 to a reducing denitration device 5, exhaust gas into which NH_3 and HCl are injected therewith is reacted on NH_3 and NO_x with the reducing denitration device 5, and simultaneously metallic Hg is oxidized to HgCl_2 under presence of NCl . Thereafter, for the exhaust gas, dust is removed with an electrostatic precipitator 8 via an air preheater 6, and a heat exchanger 7, and thereafter removal of SO_2 in the exhaust gas and removal of HgCl_2 are simultaneously executed with wet desulfurization equipment 9. Though excess HCl is contained in the exhaust gas coming out from the reducing denitration device 5, the HCl is absorbed in alkali aqueous solution with the denitration device 5, and not exhausted from a stack.

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